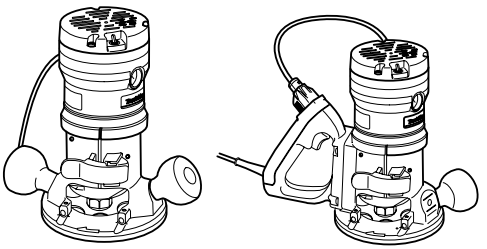
Router

MODEL RF1100/RF1101
MODEL RD1100/RD1101



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I N S T R U C T I O N M A N U A L

⚠ **WARNING:**
For your personal safety, READ and UNDERSTAND before using.
SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

www.makitatools.com

SPECIFICATIONS

Model	RF1100	RF1101	RD1100	RD1101
Collet chuck capacity	1/2" and 1/4"			
No load speed (RPM)	24,000/min.	8,000 - 24,000/min.	24,000/min.	8,000 - 24,000/min.
Overall height	223 mm (8-3/4")			
Net weight	3.2 kg (7.1 lbs)		3.6 kg (7.9 lbs)	

- Manufacturer reserves the right to change specifications without notice.
- Specifications may differ from country to country.

GENERAL SAFETY RULES

USA001-2

(For All Tools)

⚠ **WARNING:**
Read and understand all instructions. Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

SAVE THESE INSTRUCTIONS

Work Area

1. **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control.

Electrical Safety

4. **Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adaptor plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.** If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.

5. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.

6. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.

7. **Do not abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately.** Damaged cords increase the risk of electric shock.

8. **When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W".** These cords are rated for outdoor use and reduce the risk of electric shock.

Personal Safety

9. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.

10. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.

11. **Avoid accidental starting. Be sure switch is off before plugging in.** Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents.

12. **Remove adjusting keys or wrenches before turning the tool on.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.

13. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.

14. **Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions. Ordinary eye or sun glasses are NOT eye protection.

Tool Use and Care

15. **Use clamps or other practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.

16. **Do not force tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.

17. **Do not use tool if switch does not turn it on or off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.

18. **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.

19. **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.

20. **Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools with sharp cutting edges are less likely to bind and are easier to control.

21. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.

22. **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool, may become hazardous when used on another tool.

SERVICE

23. **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.

24. **When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual.** Use of unauthorized parts or failure to follow Maintenance instructions may create a risk of electric shock or injury.

USE PROPER EXTENSION CORD: Use only three-wire extension cords that have three-prong grounding-type plugs and three-pole receptacles that accept the tool's plug. Make sure your extension cord is in good condition. Replace or repair damaged or worn cord immediately. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table 1 shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

Table 1: Minimum gage for cord

Ampere Rating		Volts	Total length of cord in feet			
		120 V	25 ft.	50 ft.	100 ft.	150 ft.
More Than	Not More Than	AWG				
0	6		18	16	16	14
6	10		18	16	14	12
10	12		16	16	14	12
12	16		14	12	Not Recommended	

GROUNDING INSTRUCTIONS

This tool should be grounded while in use to protect the operator from electric shock. The tool is equipped with a three-conductor cord and three-prong grounding type plug to fit the proper grounding type receptacle. The green (or green and yellow) conductor in the cord is the grounding wire. Never connect the green (or green and yellow) wire to a live terminal. Your unit is for use on 120 volts and has a plug that looks like Fig. "A".

An adapter Fig. “B” and “C” is available for connecting Fig. “A” type plugs to two- prong receptacles. The green-colored rigid ear, lug, etc., extending from the adapter must be connected to a permanent ground, such as a properly grounded outlet box.

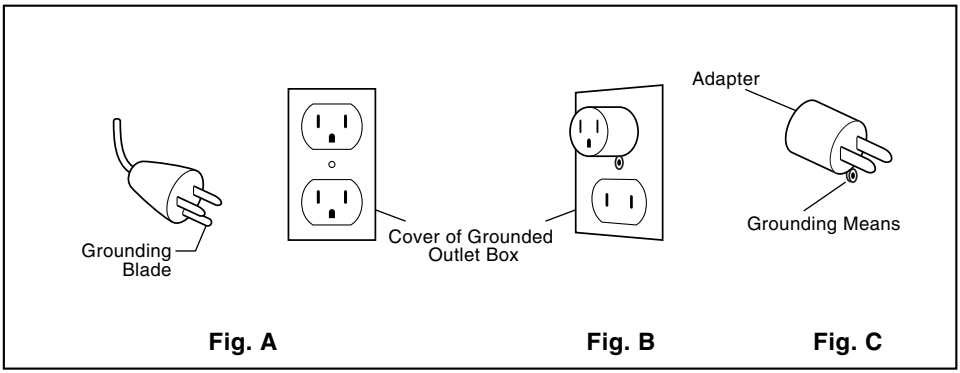

Fig. A **Fig. B** **Fig. C**

SPECIFIC SAFETY RULES

USB013-3

DO NOT let comfort or familiarity with product (gained from repeated use) replace strict adherence to router safety rules. If you use this tool unsafely or incorrectly, you can suffer serious personal injury.

1. **Hold tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord.** Contact with a “live” wire will make exposed metal parts of the tool “live” and shock the operator.
2. **Wear hearing protection during extended period of operation.**
3. **Handle the bits very carefully.**
4. **Check the bit carefully for cracks or damage before operation. Replace cracked or damaged bit immediately.**
5. **Avoid cutting nails. Inspect for and remove all nails from the workpiece before operation.**
6. **Hold the tool firmly with both hands.**
7. **Keep hands away from rotating parts.**
8. **Make sure the bit is not contacting the workpiece before the switch is turned on.**
9. **Before using the tool on an actual workpiece, let it run for a while. Watch for vibration or wobbling that could indicate improperly installed bit.**
10. **Be careful of the bit rotating direction and the feed direction.**
11. **Do not leave the tool running. Operate the tool only when hand-held.**
12. **Always switch off and wait for the bit to come to a complete stop before removing the tool from workpiece.**

13. **Do not touch the bit immediately after operation; it may be extremely hot and could burn your skin.**
14. **Always lead the power supply cord away from the tool towards the rear.**
15. **Do not smear the tool base carelessly with thinner, gasoline, oil or the like. They may cause cracks in the tool base.**
16. **Draw attention to the need to use cutters of the correct shank diameter and suitable for the speed of the tool.**
17. **Some material contains chemicals which may be toxic. Take caution to prevent dust inhalation and skin contact. Follow material supplier safety data.**

SAVE THESE INSTRUCTIONS

⚠ WARNING:
MISUSE or failure to follow the safety rules stated in this instruction manual may cause serious personal injury.

SYMBOLS

USD101-2

The followings show the symbols used for tool.

V ..... volts

A ..... amperes

Hz ..... hertz

~ ..... alternating current

n_0 ..... no load speed

.../min ..... revolutions or reciprocation per minute

FUNCTIONAL DESCRIPTION

⚠ **CAUTION:**

- Always be sure that the tool is switched off and unplugged before adjusting or checking function on the tool.

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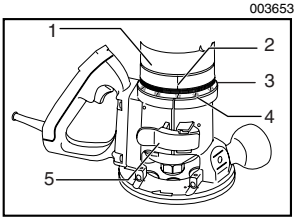

1. Motor unit housing
2. Index line
3. Scale ring
4. Graduation
5. Lock lever

Adjusting the depth of cut

Place the tool on a flat wood surface. Open the lock lever. Turn the motor unit until the bit just touches the flat surface. Close the lock lever.

Rotate the scale ring until the zero-line is on the index line on the motor unit. One graduation on the scale ring means the cutting edge of the bit is exposed 1/64" below the base. While holding up the base slightly, open the lock lever and turn the motor unit clockwise until the index line on the motor unit reaches the desired depth indicated on the scale ring. Close the lock lever firmly.

Switch action

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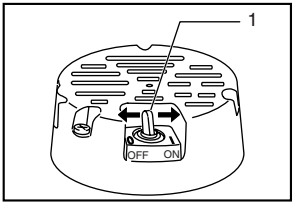

1. Switch lever

For RF1100 and RF1101

⚠ **CAUTION:**

- Before plugging in the tool, always check to see that the tool is switched off.
- Switch can be locked in "ON" position for ease of operator comfort during extended use. Apply caution when locking tool in "ON" position and maintain firm grasp on tool.

To start the tool, move the switch lever to the I (ON) position. To stop the tool, move the switch lever to the O (OFF) position.

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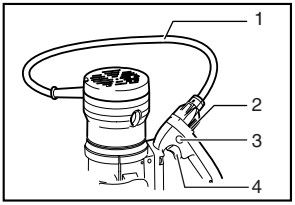

1. Motor unit cord
2. Outlet
3. Lock button
4. Switch trigger

For RD1100 and RD1101

⚠ **CAUTION:**

- Before plugging in the tool, always check to see that the switch trigger actuates properly and returns to the “OFF” position when released.
- Switch can be locked in “ON” position for ease of operator comfort during extended use. Apply caution when locking tool in “ON” position and maintain firm grasp on tool.

After connecting the motor unit cord to the outlet in the handle, move the switch lever to the “ON” position.

To start the tool, simply pull the switch trigger. Release the switch trigger to stop.
For continuous operation, pull the switch trigger and then push in the lock button.
To stop the tool from the locked position, pull the switch trigger fully, then release it.

Speed adjusting dial

For model RF1101 and RD1101 only

The tool speed can be infinitely adjusted between 8,000 and 24,000 rpm by turning the speed adjusting dial on the top of the tool. Higher speed is obtained when the dial is turned in the direction of number 6; lower speed is obtained when it is turned in the direction of number 1.
This allows the ideal speed to be selected for optimum material processing, i.e. the speed can be correctly adjusted to suit the material and bit diameter.

⚠ **CAUTION:**

- If the tool is operated continuously at low speeds for a long time, the motor will get overloaded, resulting in tool malfunction.
- The speed adjusting dial can be turned only as far as 6 and back to 1. Do not force it past 6 or 1, or the speed adjusting function may no longer work.

ASSEMBLY

⚠ **CAUTION:**

- Always be sure that the tool is switched off and unplugged before carrying out any work on the tool.

Installing or removing the bit

⚠ **CAUTION:**

- Do not tighten the collet chuck without inserting a bit, or the collet chuck will break.
- When using bit of bigger than 1-1/4" in diameter, install base plate with center hole diameter 2-1/2", replacing the original base plate.

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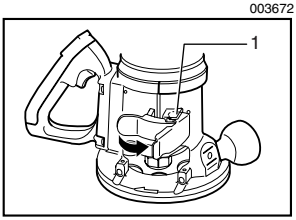

1. Lock lever

First, remove the motor unit from the base as follows.

1. Open the lock lever.
2. While holding the base, turn the motor unit counterclockwise.
3. Turn it until the pin in the base is disengaged from the groove in the motor unit. Lift the motor unit free from the base.

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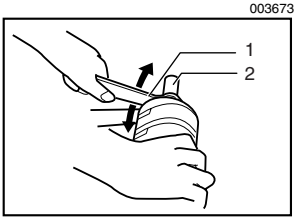

1. Wrench
2. Router bit

Insert the bit all the way into the collet cone and tighten the collet nut securely with the two wrenches.

These routers accommodate the bits with 1/2" diameter shank. When using the 1/4" diameter shank bit, replace the equipped collet chuck with the one for 1/4" diameter shank bit which is provided as the standard accessory.

To remove the bit, follow the installation procedure in reverse.

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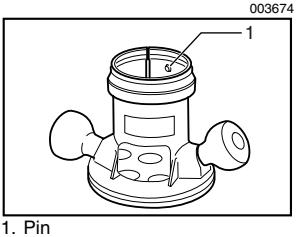

1. Pin

Reinstall the motor unit

Install the motor unit into the base as follows.

1. Open the lock lever.
2. While holding the base, insert the motor unit into the base aligning the pin with the groove in the base.
3. Confirm that the pin and the groove are aligning. Rotate the motor unit clockwise into the base.
4. Close the lock lever.

For equipped with switch-in-handle

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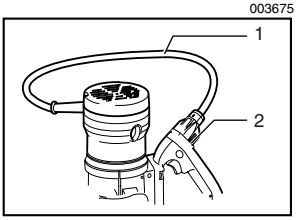

1. Motor unit cord
2. Outlet

For model RD1100 and RD1101 only

Connect the motor unit cord to the outlet in the handle.

OPERATION

Set the tool base on the workpiece to be cut without the bit making any contact. Then turn the tool on and wait until the bit attains full speed. Move the tool forward over the workpiece surface, keeping the tool base flush and advancing smoothly until the cutting is complete.

When doing edge cutting, the workpiece surface should be on the left side of the bit in the feed direction.

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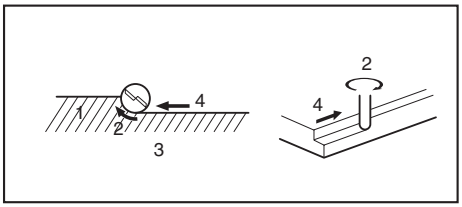

1. Workpiece
2. Bit revolving direction
3. View from the top of the tool
4. Feed direction

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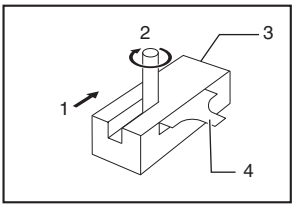

1. Feed direction
2. Bit revolving direction
3. Workpiece
4. Straight guide

NOTE:

- Moving the tool forward too fast may cause a poor quality of cut, or damage to the bit or motor. Moving the tool forward too slowly may burn and mar the cut. The proper feed rate will depend on the bit size, the kind of workpiece and depth of cut. Before beginning the cut on the actual workpiece, it is advisable to make a sample cut on a piece of scrap lumber. This will show exactly how the cut will look as well as enable you to check dimensions.
- When using the straight guide, be sure to install it on the right side in the feed direction. This will help to keep it flush with the side of the workpiece.

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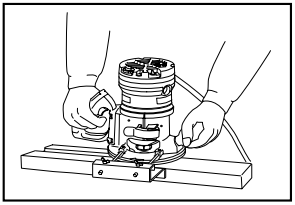

Straight guide (optional accessory)

The straight guide is effectively used for straight cuts when chamfering or grooving.

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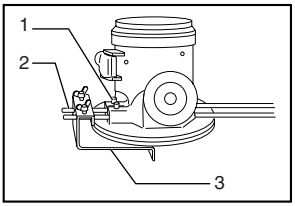

1. Hex socket bolts
2. Guide bar
3. Straight guide

To install the straight guide, insert the guide bars into the holes in the tool base. Adjust the distance between the bit and the straight guide. At the desired distance, tighten the hex socket bolts to secure the straight guide in place.

When cutting, move the tool with the straight guide flush with the side of the workpiece.

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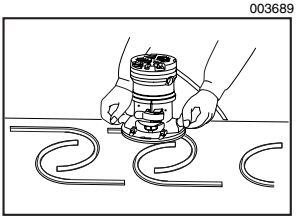

Templet guide (optional accessory)

The templet guide provides a sleeve through which the bit passes, allowing use of the tool with templet patterns.

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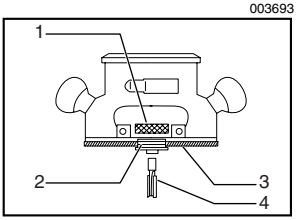

1. Lock nut
2. Templet guide
3. Base plate
4. Router bit

To install the templet guide, insert the templet guide in center hole in the base plate and secure in place with the lock nut.

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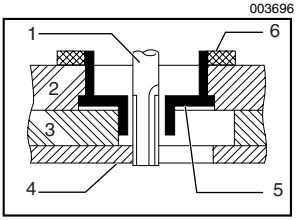

1. Router bit
2. Base
3. Templet
4. Workpiece
5. Templet guide
6. Lock nut

Secure the templet to the workpiece. Place the tool on the templet and move the tool with the templet guide sliding along the side of the templet.

MAINTENANCE

⚠ **CAUTION:**

- Always be sure that the tool is switched off and unplugged before attempting to perform inspection or maintenance.

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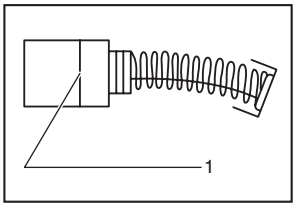

1. Limit mark

Replacing carbon brushes

Remove and check the carbon brushes regularly. Replace when they wear down to the limit mark. Keep the carbon brushes clean and free to slip in the holders. Both carbon brushes should be replaced at the same time. Use only identical carbon brushes.

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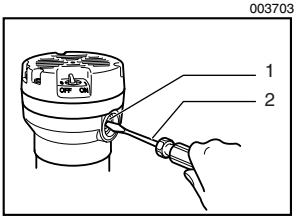

1. Brush holder cap
2. Screwdriver

Use a screwdriver to remove the brush holder caps. Take out the worn carbon brushes, insert the new ones and secure the brush holder caps.

To maintain product SAFETY and RELIABILITY, repairs, any other maintenance or adjustment should be performed by Makita Authorized or Factory Service Centers, always using Makita replacement parts.

ACCESSORIES

⚠ **CAUTION:**

- These accessories or attachments are recommended for use with your Makita tool specified in this manual. The use of any other accessories or attachments might present a risk of injury to persons. Only use accessory or attachment for its stated purpose.

If you need any assistance for more details regarding these accessories, ask your local Makita service center.

- Straight & groove forming bits
- Edge forming bits
- Laminate trimming bits
- Straight guide
- Templet guides
- Lock nut
- Clear base plate (Center hole 2-1/2")
- Wrench 27

Memo

Memo

Memo

Cut

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MAIL THIS PORTION

Your answers to the following questions are appreciated.

1. This product was purchased from:

- ☐ Home Center
- ☐ Hardware/Lumber Store
- ☐ Tool Distributor
- ☐ Industrial Supply
- ☐ Construction Supply
- ☐ Other ( )

2. Use of the product is intended for:

- ☐ Construction Trade
- ☐ Industrial Maintenance
- ☐ Home Maintenance
- ☐ Hobby
- ☐ Other ( )

3. How did you learn about this product:

- ☐ Magazine
- ☐ From Dealer
- ☐ Newspaper
- ☐ Store Display
- ☐ Catalog
- ☐ Radio
- ☐ Exhibition
- ☐ From Friend
- ☐ Previous Usage
- ☐ Other ( )

4. Most favored points are:

- ☐ Design
- ☐ Features
- ☐ Size
- ☐ Price
- ☐ Makita Brand
- ☐ Repair Service
- ☐ Durability
- ☐ Power
- ☐ Other ( )

5. Any comments:

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DATE PURCHASED						MODEL NO.											
MONTH		DAY		YEAR		SERIAL NO.											
INTL.	LAST NAME / COMPANY NAME													STATUS Married	Single	SEX M	F
STREET ADRESS																	
CITY																	
STATE		ZIP CODE					PHONE					AREA CODE					

AGE: ☐ Under 19 ☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50-60 ☐ Over 60

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(314) 909-9889

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Omaha, NE 68127
(402) 597-2925

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(716) 685-9503

OREGON
828 19th Avenue, N.W.
Portland, OR 97209
(503) 222-1823

PENNSYLVANIA
1704 Babcock Blvd.
Pittsburgh, PA 15209
(412) 822-7370

PUERTO RICO
200 Guayama St.
Hato Rey, PR 00917
(787) 250-8776

TENNESSEE
1120 Elm Hill P.
Suile 170 Nashville, TN 372
(615) 248-3321

TEXAS
12801 Stemmons Fwy Ste. 809
Farmers Branch, TX 75234
(972) 243-1150

12701 Directors Dr.
Stafford, TX 77477-3701
(281) 565-8665

3453 IH-35 North, Ste. 101
San Antonio, TX 78219
(210) 228-0676

WISCONSIN
Lincoln Plaza Shopping Ctr.
2245 S. 108th St. West Allis, WI 53227
(414) 541-4776

CUSTOMER'S RECORD

When you need service: Send complete tool (prepaid) to one of the Makita Factory Service Centers listed, or to an Authorized Makita Service Center. Be sure to attach a letter to the outside of the carton detailing the problem with your tool.	Date Purchased
	Dealer's Name & Address
	Model No.
	Serial No.

WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

MAKITA LIMITED ONE YEAR WARRANTY

Warranty Policy

Every Makita tool is thoroughly inspected and tested before leaving the factory. It is warranted to be free of defects from workmanship and materials for the period of ONE YEAR from the date of original purchase. Should any trouble develop during this one year period, return the COMPLETE tool, freight prepaid, to one of Makita's Factory or Authorized Service Centers. If inspection shows the trouble is caused by defective workmanship or material, Makita will repair (or at our option, replace) without charge.

This Warranty does not apply where:

- repairs have been made or attempted by others:
- repairs are required because of normal wear and tear:
- the tool has been abused, misused or improperly maintained:
- alterations have been made to the tool.

IN NO EVENT SHALL MAKITA BE LIABLE FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES FROM THE SALE OR USE OF THE PRODUCT. THIS DISCLAIMER APPLIES BOTH DURING AND AFTER THE TERM OF THIS WARRANTY.

MAKITA DISCLAIMS LIABILITY FOR ANY IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF "MERCHANTABILITY" AND "FITNESS FOR A SPECIFIC PURPOSE," AFTER THE ONE YEAR TERM OF THIS WARRANTY.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

Makita Corporation of America
2650 Buford Hwy., Buford, GA 30518

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